

**REMARKS/ARGUMENTS**

Claims 1-11 and 16-18 are present in this application. By this Amendment, the specification has been amended. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

In paragraph 3 of the Office Action, the Examiner requests that the status of the British applications listed on page 5 of the specification be updated. The specification has been amended accordingly. Withdrawal of the objection is requested.

Claims 1-11 and 16-18 were rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,368,914 to Barrett in view of U.S. Patent No. 6,050,208 to Kennedy. This rejection is respectfully traversed.

Barrett discloses a component intended to reduce vibrations in a structure, such as an aircraft, by converting vibrations into heat. See col. 1, lines 18-22. In particular, Barrett aims to improve such components by increasing the shear strain in the viscoelastic damping layer. The Office Action recognizes that Barrett lacks at least several features of the claimed invention. For example, Barrett lacks the claimed core of plastics or polymer material having a thickness greater than or equal to 15 mm. Barrett describes its core having a thickness of 5 mils (about 0.13 mm). Additionally, claim 1 recites that the plastics or polymer material forming the core is a compact thermoset material. Barrett rather describes that its core is a viscoelastic foam. Still further, Barrett lacks the claimed first and second outer plates having a thickness greater than or equal to 3 mm. The plates in Barrett are rather described as 36 mils (or about 0.9 mm). Despite these distinctions, the Office Action contends that it would have been obvious to modify Barrett in view of Kennedy to meet these features of the invention. Applicant respectfully disagrees.

Initially, Applicant submits that the modifications proposed in the Office Action are not remotely suggested in the Barrett patent. That is, the proposed modifications would so drastically change the structure and functionality of the Barrett patent structure that the device would be entirely inoperable for its intended purpose. In this context, the Office Action contends that “adjusting the thickness of the outer structural layers for any given application would have been within the ordinary skill of the art.” Claim 1 in effect requires a minimum thickness of 21 mm as compared to about 2 mm using the dimensional requirements described in Barrett. Applicant submits that nothing could possibly provide an adequate suggestion to modify the Barrett structure to increase its total thickness by an order of magnitude equivalent to 10X its intended dimensions. Moreover, the Office Action does not even address the claimed thickness of the core “greater than or equal to 15 mm.” Given that Barrett describes a laminate to be used in aircraft, any increase in thickness, let alone an increase of the order of magnitude proposed in the Office Action, would have significant and detrimental affects on the design and use of the laminate construction. The same point applies to converting a foam to a compact material, which would also result in a substantial increase in weight. Such size and weight increases directly contrast the intended purpose of the Barrett structure.

Applicant further submits that the modifications proposed in the Office Action are also misplaced using the Supreme Court’s *KSR* standard. That is, the Supreme Court in *KSR* noted that if the proposed modification (via a purportedly known technique) would have been beyond the skill of one of ordinary skill in the art, then using the technique would not have been obvious. Applicant submits that those of ordinary skill in the art could not have modified the Barrett structure in the orders of magnitude suggested in the Office Action. Moreover, the Supreme Court in *KSR* provided rationales for supporting a conclusion of obviousness on a premise of

predictability or predictable results. The modifications proposed in the Office Action would so drastically affect the structure and operation of Barrett that the results of the modifications would be entirely unpredictable. As noted above, those of ordinary skill in the art would appreciate that size and weight are important considerations in aircraft design, and the proposed modifications (resulting in at least a 10X increase in thickness as well as increased weight) are directly contrary to such considerations. Applicant thus submits that the results of the proposed modification would not have been predictable.

With regard to independent claim 16, the Office Action contends that it would have been obvious “to have formed the core and sheets of Barrett by injection molding . . . .” Applicant respectfully disagrees. Barrett describes manufacture of its laminate by “standard hand lay-up techniques” (see col. 4). This approach is necessary to ensure proper orientation of the different plies in the various layers of Barrett and the partial connection of interlayer 20 to one of the outer layers 12. This connection of the interlayer 20 to one of the outer layers 12 in Barrett is essential to the interlayer 20 performing its function of coupling vibrations into the viscoelastic core and would be very difficult to achieve if the core material were injected. Thus, like the shortcomings in the proposed combination discussed above with regard to independent claim 1, Applicant submits that Barrett lacks any suggestion of the proposed modification (in fact, Barrett teaches away from such a modification), and the proposed modification would be beyond the skill of one of ordinary skill in the art (which according to the Supreme Court in *KSR* would therefore be unobvious). The results of the proposed modification also would be unpredictable as the coupling function would be compromised.

Reconsideration and withdrawal of the rejection are respectfully requested.

KENNEDY  
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In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims are patentable over the art of record and that the application is in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Prompt passage to issuance is earnestly solicited.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to Deposit Account No. 14-1140.

Respectfully submitted,

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